

CITY OF PULLMAN

Administration/Finance

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Department of Water Resources

January 21, 2004

Mr. Karl Dreher, Director
Idaho Department of Water Resources
1301 North Orchard St.
Boise, ID 83706

Dear Mr. Dreher:

We are writing this letter regarding the groundwater management issue relating to the Palouse Basin Aquifer that serves Pullman, Moscow, and the surrounding area. In a letter to you dated January 5, 2004, City of Moscow Mayor Marshall Comstock made the following recommendation to you regarding the petition to the Idaho Department of Water Resources for the State of Idaho to assume management control of the groundwater underlying the Idaho portion of the Palouse Basin Aquifer:

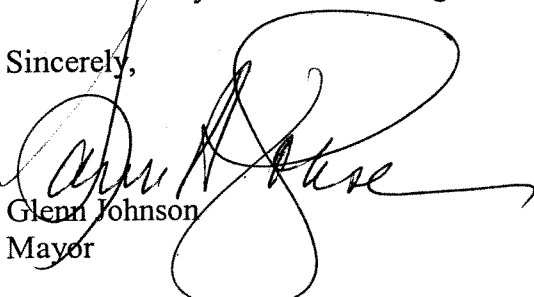
At the December 22, 2003 meeting, the Moscow City Council made the unanimous recommendation that IDWR forebear taking any action on the petition at this time. This would allow the City, the citizen groups, the community, and the Palouse Basin Aquifer Committee to meet together to explore opportunities for working together to achieve optimal management of our water resource.

We discussed Mayor Comstock's letter at our City of Pullman City Council meeting on January 13, 2004. The City of Pullman strongly concurs that we should continue local management of the Palouse Basin Aquifer. We are very pleased with the various local efforts that are currently underway. At our quarterly regional meeting on January 14, 2004, presentations regarding these regional water management efforts were given by representatives from the City of Moscow, the City of Pullman, the Palouse Basin Aquifer Committee, and the Palouse Conservation District. The meeting was attended by representatives of a variety of local entities including the City of Moscow, Latah County, the University of Idaho, the City of Pullman, Whitman County, and Washington State University. Handouts that were provided at that meeting are attached as additional related background. We urge you to allow these local efforts to continue rather than taking any action on the petitions at this time. We feel this is an

interstate issue and that it would be inappropriate for the State of Idaho to unilaterally designate the Idaho portion of the Grande Ronde Aquifer as a Critical Groundwater Area pursuant to Idaho Code or the Idaho portion of the Wanapum Aquifer a Groundwater Management Area pursuant to Idaho Code.

Thank you for considering our City of Pullman position on this issue.

Sincerely,



Glenn Johnson
Mayor

Cc: Pullman City Councilmembers
Pullman City Supervisor John Sherman
Pullman Public Works Director Mark Workman
Pullman City Attorney James Sloane
Moscow Mayor Marshall H. Comstock
Moscow City Supervisor Gary Riedner
Moscow Public Works Director Les MacDonald
Whitman County Commissioners
Latah County Commissioners
Washington State University President V. Lane Rawlins
University of Idaho Interim President Gary Michael
Colfax Mayor Norma Becker
Palouse Mayor Michael Echanove

Palouse Basin Aquifer Committee (PBAC)

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Department of Water Resources

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- 2. Purpose**
- 3. Goals**
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- 5. Overview of OK Project Results**
- 6. Continuing Research Projects**

Palouse Basin Aquifer Committee (PBAC)

Membership

Cities – Colfax, Moscow, Pullman
Counties – Latah, Whitman
University of Idaho, Washington State University

Purpose

The common water supply serving the western portion of Latah County, Idaho in the general vicinity of Moscow, and the eastern portion of Whitman County, Washington in the general vicinity of Pullman (referred to herein as the Palouse Basin Aquifer), is an important regional concern and maintaining and conserving that resource is of critical importance to each party to this agreement. The parties deem it to be in the public interest to work jointly and cooperatively on water resource problems and issues, while maintaining a consideration of the benefits of growth and economic development.

PBAC Duties

1. Coordinate planning to assure a long-range supply of water to the parties.
2. Maintain and continue to update and expand the databases developed through previous studies and data acquisition efforts.
3. Encourage conservation to promote the life of the Palouse Basin Aquifers.
4. Investigate supplemental and/or alternate sources of water.
5. Educate and advise the parties on the quantity and quality of the public water supply within the Palouse Basin Aquifers.
6. Act as a liaison between the parties on water resource concerns.
7. Promote communication between the parties, the Washington Department of Ecology, and the Idaho Department of Water Resources.
8. Encourage and promote citizen education concerning local water supplies.
9. Seek grant funding to expedite and facilitate the necessary research and projects to meet the PBAC goals.
10. Perform such other duties or functions as may be agreed to by the parties in writing and made in an addendum to this agreement.

Goals

- Ensure a sustained, quality water supply for the region.
- Stabilize the Grande Ronde Aquifer System water levels by 2020.

Finances

Moscow, Pullman, UI, WSU – contribute \$8,000 annually to the PBAC administrative budget. Each entity has two voting members.

Latah, Whitman, and Colfax – contribute \$2,000 annually to the PBAC administrative budget. Each entity has only one voting member.

Operations (what PBAC does)

Guiding Document – 1992 Ground Water Management Plan

PBAC employs an executive secretary (1/2 time basis) to manage and administrate, and student help to monitor water levels in over 50 local area wells.

The UI Water Resources Research Institute is the keeper of the budget and oversees the research project agreements.

Formal and informal communication and presentations with various entities, organizations, and community groups.

Sponsorship of research projects.

Maintenance of a web site, www.webs.uidaho.edu/pbac/

Publication of an annual report on regional water use.

Water Summit and Public information sessions held every few years.

Research Summit involving UI, WSU and other persons of interest and expertise.

Library of dissertations, theses and other articles dealing with local water issues.

Conducts monthly meetings, open to the public, covering all aspects of PBAC progress toward achieving the listed goals and related topics.

Osiensky-Keller Research Project (the OK Project)

This was originally a three-year comprehensive study started in the fall of 1999 to evaluate the hydrostratigraphic conditions in the Palouse Basin. In other words, using improved equipment and techniques, the research set out to more clearly define the basin boundaries, the recharge to the basin, the movement of ground water into and between aquifer systems, the ground water losses to the basin and the connectivity between pumping centers within the basin. This project was extended a fourth year and was funded from the Moscow, Pullman, UI, and WSU at a level of \$20,000 a year for this research project.

General OK Project Objectives

1. Locating and quantifying natural, ground water discharges from the two major aquifer systems: the shallow or Wanapum aquifer system and the deep or Grande Ronde aquifer system;
2. Evaluating existing rates of ground water flow from the Wanapum/Vantage aquifer system into the Grande Ronde system and the consequences of this hydraulic connection on water quality in the Grande Ronde;
3. Confirming the high, basin-scale, hydraulic diffusivity (i.e., transmissivity/storativity) of the Grande Ronde implied by ground water-level data and previous flow modeling studies.

Results: Five thesis projects have been completed presenting study details and results on specific OK Project goals and two more are in the process of being completed. A separate dissertation drew on OK Projects results. A formal summary of the results of all the theses is in process, and materials are available for review.

- Expanded significantly the list of production well logs and their completion intervals.
(There is a much better picture of the location of the water bearing strata and more accurate information on which strata are sources for producing wells and which are not.)
- Expanded collection of isotopic signatures of water samples throughout the basin.
(This has confirmed the old age of deep aquifer water, the existence of recharge to the shallow aquifer, and the absence of springs from the deep aquifer.)
- Significantly increased the number of basin wells being sampled for ground water level and geochemical data.
(The project has greatly improved the quantity and quality of ground water level data and well log data, and has made them available to the benefit of all future studies and area residents interested in hydrogeology of the area.)

- Cleaned mud out of the critical DOE test well which was flooded by a high flow of Paradise Creek.
(The casing has now been extended to prevent any future flooding of the well and the test well has been restored to working order and a permanent data logger is gathering valuable ground water level measurement.)
- Determined that all springs sampled in the first three years are deriving their water either from perched water tables in the soil horizons or from the shallow Wanapum aquifer system.
(Recent sampling of springs in the Colfax area has determined that these discharge directly from the deeper Grande Ronde aquifer system. This means that natural losses from the Grande Ronde aquifer system to springs and/or seepage to streams is significantly to the west and north of previously speculated losses. This is another contradiction to previous hypotheses that assumed considerable losses from the Grande Ronde aquifer system occur along the Snake River and other area streams and springs.)
- Determined that the base flow for a number of local streams is comprised of shallow aquifer water.
- Ran several large-scale aquifer pumping tests resulting in a much better understanding of basin boundaries and pumping area interconnectivity.
- Documented basin-wide hydraulic responses to pumping events.
- Developed a comprehensive ground water monitoring program for the Grande Ronde aquifer system.
- Completed a detailed investigation of spring discharges in the Union Flat Creek and South Fork Palouse River drainages.
- Documented that the few springs discharging into the Snake River are from the shallow aquifer system and not the Grande Ronde aquifer system.
- Showed the lack of hydraulic connection between the Wanapum and Grande Ronde aquifer systems during pumping tests.
- Documented degrees of well interference between Grande Ronde wells in the Moscow-Pullman basin.
- Documented a hydraulic connection across the Kamiak Gap and redefined the northern and northwestern extent of the basin.

Continuing Research from the OK Project

- Expanding the ground water monitoring network to the Snake River, into the Colfax area and into the Klemgard Park area along Union Flat Creek.
- Designing and conduct additional aquifer tests to help clarify some confusing data and help delineate potential capture zones for locating artificial recharge sites (i.e., infiltration basins and passive and/or active injection).

- Evaluating the spatial distribution of ground water age dates relative to the ground water levels and distance along the flow paths in order to delineate ground water movement.
- Mapping and collecting water samples from springs along the Palouse River downstream of Colfax, from City of Colfax wells, and from any other deep wells that can be located in the Colfax area.
- Continuing to analyze the rapidly expanding database of ground water levels and other ground water parameters as additional wells are logged and extensive water level measurements are recorded.

Other Funded Research Projects

- Preparatory work for a passive drainage well.
(This involves designing a passive drainage well or well field connecting the shallow aquifer system to the deep aquifer system that will allow monitoring of recharge to the deep aquifer from the shallow aquifer in a pilot study. The planned site is the UI Ground Water Test Site.)
- Moscow Mountain Front Runoff Study
(Evaluating existing runoff and water quality data from historical studies along with additional data collected in the Paradise Creek watershed above the USGS gaging station in west Moscow. Probabilistic hydrographs were constructed to show the amount of runoff available and the water quality during a typical year. Estimates were also made of infiltration and the runoff for the South Fork of the Palouse River. This study shows the quantities of runoff available for possible water right applications from PBAC entities which could be used to supplement current ground water pumping.)
- Plotting historical water levels, for approximately 30 Moscow and Pullman wells with records dating back to the 1920s.
(These hydrographs strongly suggest the existence of significant vertical gradients back to the early stages of pumpage. These gradients imply natural ground water flow from recharge areas to discharge areas within the Grande Ronde under natural (predevelopment) conditions.)
- Designing and beginning compilation of a GIS database for the Basin.
(This will bring together most of the scattered ground water related data and place it in easily accessible layers covering the basin.)
- Lithologic mapping of the Moscow area.
(Will clarify what is known of subsurface geology and to provide probable areas for recharge sites.)
- Geologic mapping of a portion of Whitman County.
(This will result in an additional 24000 scale geological map which will greatly aid future work and can be made available to the public and others.)

- A Ground Water Quality Testing and Mapping for the Basin.
(This study is dependent on the Idaho Department of Environmental Quality providing their portion of the necessary funding that was previously allocated but then withdrawn due to funding reductions in Idaho. Idaho DEQ is requiring it prior to any full-scale recharge projects in the Basin.)

Watershed Planning in the Palouse Watershed (WRIA 34)

The Watershed Planning Act (RCW 90.82)

The intent of the Watershed Planning Act (RCW 90.82) is to develop watershed plans with local input from stakeholders who have the greatest knowledge of the resources in the watershed; who have the vision and aspirations for the future of the watershed; and who have the greatest stake in the management of water resources. The 1998 Washington State legislature passed HB 2514, codified into RCW 90.82, to set a framework for continued management of the State's water resources, including water quality issues, in-stream flow needs, and salmon habitat needs. There are currently 42 watersheds involved in this process. Watershed planning occurs in four phases with funding from the Washington Department of Ecology :

1. Phase I: Organize the Planning Unit
2. Phase II: Conduct Technical Watershed Assessments
3. Phase III: Develop a Watershed Plan
4. Phase IV : Implement the Watershed Plan

Who is Involved?

In 2002, the "Planning Unit" was organized by the initiating governments in the watershed (see below). The Palouse Conservation District was designated as the lead agency for watershed planning in WRIA 34 by the initiating governments. In coordination with the initiating governments, the Palouse Conservation District formed the WRIA 34 Planning Unit. This WRIA 34 Planning Unit will be responsible for guiding the overall development of the watershed plan for the Palouse Basin. .

Current Planning Unit Membership

Adams Conservation District
Adams County¹
City of Colfax
City of Medical Lake
City of Moscow
City of Palouse¹
City of Pullman
Idaho Dept. of Environmental Quality
Land Owner - Cow Creek)
Land Owner - Elberton
Land Owner - Pullman
Land Owner - Rock Lake
Land Owner - Sprague Lake
Latah County Commissioners
Latah SWCD
Lincoln County¹
Palouse Basin Aquifer Committee

Palouse Conservation District Palouse²
Water Conservation Network
Spokane County¹
Sprague Lake Users Group
Steptoe Water and Sewer District¹
Town of Farmington
University of Idaho
USDA Forest Service - Clearwater NF
Washington Association of Wheat
Growers
Washington Cattleman Association
Washington Department. of Ecology
Washington State University
Whitman Conservation District
Whitman County¹
Whitman County Planning Commission
WSU Agricultural Extension

¹ Initiating Government

² Lead Agency

What is required?

Watershed planning is conducted at a large scale and addresses complex water resource issues. The law (RCW 90.82) specifies certain types of information that must be gathered and requires the Planning Unit address a range of potential water resource management strategies. The law also includes constraints on the activities of Planning Unit. For example, the Planning Unit does not have the authority to change existing laws, alter water rights or treaty rights, or require any party to take an action unless that party agrees.

What is the current status of planning?

The WRIA 34 Planning unit has agreed to address the required water quantity elements of watershed planning as well as optional elements related to water quality, water storage, instream flows, and habitat. The Planning Unit is currently working on the Phase II technical assessment of the planning process, which will result in technical documents. These documents will provide the basis for subsequent planning recommendations in the watershed plan.

The Planning Unit selected a consulting firm (Golder Associates) in November 2003 to conduct the technical assessment. The initial assessment will compile and analyze existing data related to climate, surface water, groundwater, water use, and water rights. It will also develop an evaluation of both the physical and regulatory availability of water resources in the watershed.

The Planning Unit is also preparing grant applications for "supplemental" assessments of water quality, water storage and instream flow. These assessments will provide more detailed and in-depth assessments of specific problems or potential solutions identified in the initial technical assessment and will probably include additional data collection.

What are the expected outcomes of watershed planning?

One of the key outcomes of watershed planning is directed at management of water supply for both human and ecological needs. Watershed plans will not replace the current process for applying for and obtaining water rights, and adopting a watershed plan will not change the validity or priority of existing water rights or claims. However, the watershed plan will provide strategies for increasing water supplies in the management area that may have binding responsibilities on agencies or organizations that agree with and adopt the watershed plan. These strategies could include things like water conservation, water re-use, voluntary water transfers, new water allocations, water quality enhancements and water storage projects.

Obligations and Expectations

When the watershed plan is approved by the WRIA 34 Planning Unit and participating state agencies, the Washington Department of Ecology is obligated to adopt watershed rules that will implement the water management strategies identified in the plan. The rules will be binding on participating state agencies and local governments. Ecology is also required to track its work obligations under the local watershed plans and give priority to making water rights decisions in watersheds that have developed sufficient information and agreement to make decisions.

How can I participate?

The Planning Unit meetings are open public meetings which are held on the second Wednesday of each month in Colfax from 1:00 pm to 4:00 pm. If you are interested in attending meetings or want information on a particular topic please contact Rob Buchert, Palouse Conservation District at (509) 332-4101 (e-mail palousecd@pullman.com), or simply attend a meeting.

